TECHNOLOGY FACT SHEET

MSC-24216-1 A Description Of An Octonode Connecting Node Concept And Method (USPN 8,047,473)

Innovators at NASA's Johnson Space Center (JSC) have developed the Octonode, a 26-faced Great Rhombicuboctahedron Archimedean solid that allows easy integration of multiple docking mechanisms, hatches, windows, and external and internal systems via the use of flat surfaces. The uniqueness of the innovation is the availability of the 26 panels (6 octagons, 8 hexagons, and 12 squares) for different uses. The panels can be constructed with a variety of materials and manufacturing processes then connected together and sealed. Other types of connecting nodes require elaborate tooling and processes to manufacture curved surfaces. The Octonode's shape and its use of flat panels lends itself to easy integration of ports and subsystems. JSC has applied for patent protection for this technology.

Benefits

- **Easy assembly:** Requires no elaborate tooling or processes for panel construction or structure production
- **Cost-effective:** Uses conventional materials and manufacturing techniques
- **Flexible:** Facilitates integration of multiple docking mechanisms, hatches, windows, and internal and external systems with its flat surface construction
- **Variable:** Scalable to any desired size

Applications

- Modular spacecraft architecture
- Prefabricated building systems

Patent

JSC has received patent protection for this technology (USPN 8,047,473).

Licensing and Partnering Opportunity

This technology is being made available through JSC's Technology Transfer and Commercialization Office, which seeks to transfer technology into and out of NASA to benefit the space program and U.S. industry. NASA invites companies to consider licensing this technology for commercial applications.

Contact Information

If you would like more information about this technology or about NASA's technology transfer program, please contact:

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